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AUTHOR Streiff, Virginia
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ABSTRACT

This paper describes the design and practical application of a program called "Listening" which has been developed to help young learners of English as a second language gain some strategies for comprehension in their new language. The long-range goal of the program is to develop the learner's active involvement in thinking about the facts he listens to, in applying language and thinking processes which help him comprehend and retain the salient features of a message which often exceed the explicit facts, and then in thinking more about them. Inquiry is the principal device of the program. The children learn to ask relevant, appropriate, and substantial questions, and to value such inquiry by actually engaging in the activity. Question-asking acts as the pivot from second language learning to learning in the second language. A description of the program is provided, with remarks on the objectives and characteristics of the various states of the program. (Author/VM)

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Question Generation by First Graders: A Heuristic Model

Virginia Streiff

While today's most eminent educational leaders and critics are insisting that the facts must be viewed at best as tenuous, our technology is developing even more means for storing and retrieving the daily influx of knowledge. One's respect for factual knowledge grow's even healthier with the recognition that Benjamin S. Bloom and his colleagues determined nine categories of factual knowledge, which explicate three inclusive categories: knowledge of specifics, knowledge of ways and means of dealing with specifics, and knowledge of universals and abstractions. (Bloom, et al, 1956) The nine subcategories of these three suggest even further classes, and a self-respecting computer might consider this a serious understatement.

Considering such an array of facts and attention to them, it is little wonder that in classroom practice the term "comprehension" has come to be equated with recognizing and recalling facts, as in reading comprehension, or as in testing for listening comprehension. (Guszak, 1967; Sanders, 1966)

As both the research and the editorializing in inquiry education are urging, for responsible scholars and citizens, getting the facts is just the beginning, and comprehension of them is the next step.

The notion that message-receiving is an active endeavor calling for many more processes beyond getting and recalling the facts is not new. But classroom practices which foster these processes are few and far between, as amply documented in the research on listening. (Duker, 1966) While not all message-

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sending is intended for the listening mode alone, much of it in the classroom is. One study estimates that elementary school children spend approximately sixty percent of their classroom day engaged in this activity, if we can consider thinking at the recognition-recall level as active engagement. (Wilt, 1966) It was this kind of thinking that another study revealed was the main focus of teachers' questions to students about reading material in twelve randomly selected classrooms in Texas, to the extent that about seventy percent of the teacher's questions required only that the children recall explicit facts from the material they had read. This relegated other thinking processes (e.g. interpretation, analysis, substantiated evaluation, etc.) to the remaining thirty percent of the questions. (Guszak, 1967) This kind of classroom message to children is probably responsible for the facts behind the lament of one graduate student who recently wrote, " Too many students will do anything to avoid the real essence of education which takes place only when the student reacts to material after being exposed to it and personally thinking about it." (Lister, 1971)

The program to be described in this paper grew out of a concern with such problems in message-receiving, particularly as they are faced by young learners of English as a second language now in their classrooms, and as they will be faced in whatever media transmit the messages in their future.

The objective of this paper is to describe the design and practical application of the program called "Listening", which was developed to help these second language learners gain some strategies for comprehension in their new language. The working hypothesis in the development of the Listening

program is that these children will be better equipped as learners if they first receive systematic instruction in learning to use their new language as a medium for learning, learning used here as a paraphrase for thinking, particularly for thinking beyond the recognition and recall level to more abstract levels of cognition.

In the course of implementing this program with thirteen classrooms of first grade children whose native language was either Navajo or Spanish, it became apparent that the heuristic tools the program provided the children in their second language might also be beneficial for improving their comprehension skills in their native language. This is one area in which experimentation might be fruitful for the multi-lingual education of young children.

In terms of its general and specific objectives, the Listening program assumes the validity of Covington's point:

> ....before the student can derive maximum benefits from a strong process-oriented approach to education, it will be necessary to develop a curriculum model which has as one of its fundamental objectives the fostering of intellectual processes in their own right, a goal which must be fully integrated and coordinated with other more traditional objectives such as mastery of content and assimilation of cultural values. (Covington, 1970)

The long-range goal in this program is the learner's active involvement in thinking about the facts he listens to, in applying language and thinking processes which help him comprehend and retain the salient features of a message which often exceed the explicit facts, and then thinking more about them.

The thinking processes fostered in this program are those described by Bloom in A Taxonomy of Educational Objectives, Handbook 1: The Cognitive Domain. (Bloom, et al, 1956) Beyond the knowledge level which emphasizes the processes of recognizing and recalling, they are comprehending, applying, analyzing, synthesizing, and evaluating. The stages of the Listening program developed in daily lesson plans to date focus specifically on the sequence of comprehension processes

described by Bloom and his associates, and extrapolated for the program as:

i. Paraphrasing
   a. rephrasing the information from one symbolic form to another. The student can 'translate' verbal information to visual or spatial terms, for example identifying or building a model which has been described verbally.
   b. rephrasing the information from one level of abstraction to another; the students can summarize a story, or 'translate' a general principle by giving an example of it.
   c. rephrasing the information from one verbal form to another, as in providing the literal meaning of figurative speech.

ii. Interpreting
   a. comparative relationships: The student can distinguish related from unrelated ideas; he can distinguish identical, similar, and different ideas, etc.
   b. relationship of implication: The student understands the relationships between evidence presented and an implication.
   c. relationship of generalization to supporting evidence: The student can survey a set of evidence and find within it a characteristic common to each piece of evidence, which leads to the generalization.
   d. relationship of a skill or definition to an example of its use: A skill or definition is described for the student and he can identify or compose an example of it.
   e. cause and effect relationships: The student can describe or identify the cause of specific effects.

iii. Extrapolating
   a. predicting the continuation of a sequence: The student can accurately predict an event on the basis of established evidence.
   b. inferring: supplying data implied but not stated.
   c. distinguishing probable from improbable consequences.

These comprise the cognitive objectives for the lessons of stages one and two, approximately one hundred lessons. The outline projected for stages three through six incorporates the processes classified as

applying, analyzing, synthesizing and evaluating.

Inquiry is the language process by which these thinking processes are fostered in the course of each daily lesson. Inquiry as a learning tool has many advocates, recent among them Postman and Weingartner(1969), who reiterate its value as "the most powerful intellectual activity man has ever developed." They underscore the process of inquiry as a learning-how-to-learn tool, pointing out that "... once you have learned how to ask questions--relevant, appropriate and substantial questions, you have learned how to learn, and no one can ever keep you from learning whatever you want or need to know."

While much of the focus in inquiry education is on getting teachers to ask better questions (Guszak, 1967; Sanders, 1966) the power of inquiry as a learning-how-to-learn tool suggests that it should be at the disposal of the students, particularly in a program or curriculum which is heuristic in nature. The Listening program is designed with the optimism that curricula like Covington and his colleagues propose will flourish increasingly, but also with a practical view toward what is actually the case in many classrooms today, if the research on teachers' questions can be generalized at all. This practical view is the basis for designing the Listening program in terms of explicit lesson plans through which the teacher becomes familiar with the specific thinking processes that various kinds of questions can trigger. Further, the lesson plans direct the teacher's steps so that the children ask the questions.

Accepting the principle of appropriate practice of desired behavior as the best way to achieve that behavior, and in addition the notion that "the critical content of any learning experience is the method or process through which the learning takes place" (Postman and Weingartner, 1969), it makes sense to have the children learn to ask relevant, appropriate and substantial questions, and to value such inquiry, by actually engaging in this activity.

It is through this means--inquiry which triggers thinking beyond the recognition-recall level--that a transition can be effected from learning a second language to learning in a second language. The transition focuses on the difference between the communications objectives of second language programs and the objective of curriculum, which is (or ought to be) that of fostering thinking. Wilson explicated this point (Wilson, 1970) when he urged that children, beyond learning to communicate in their new language, must learn to think in it. For the children's benefit as maturing learners in a new language, the transition from language acquisition to a more sophisticated language-comprehension program must view the relationship between language and thinking as a process in which the two develop interdependently, and in which the relation of thought to word undergoes changes, as Vygotsky's work led him to conclude. (Vygotsky, 1962)

In the Listening program question-asking acts as the pivot for the transition from second language learning to learning in the second language. Question-asking is the constant language process used by the children for the communication tasks of their English as a second language program, and also for the higher level thinking tasks in the Listening program. The difference might be grossly illustrated as the difference in purpose between asking "Is Mary skipping?",in a situation where one child is skipping and another is clapping her hands , to practice yes/no questions with the present progressive tense and two forms of verb phrase; and asking "Is Mary skipping?" because you infer from the strange noises behind your back that six-year-old Mary has finally learned to skip, and you want to confirm or correct your inference.

Inquiring and thinking beyond the knowledge level (as Bloom et al describe it) are the major heuristic characteristics of the Listening program. By the nature of their presence as learner objectives in every lesson in the program they are both the means, or media, and the intended learning outcomes.

The Listening program was developed as a part of a comprehensive and innovative primary curriculum provided by Consultants in Total Education for Navajo children in Bureau of Indian Affairs Schools on the Navajo Reservation, and for Mexican American children in Fresno, California, public schools. Language skills taught to pre-first graders

in the English as a second language component of the CITE curriculum provide the prerequisite foundation for the Listening program.

The children, through their ESL lessons, learned to ask the range of question types available in English-- the wh- questions, including simple how- and why- questions, and yes/no- questions. They learned to ask such questions when cued by an indirect question or command, at first from the teacher and then from another child. They asked these questions in the context of situations designed by the program writers to place all the language-learning in a meaningful context. The children's facility grew through participation in a systematic presentation including the major sentence patterns of English, and the processes of substitution, deletion, expansion, and transformation. Teacher's regular reports on the children's achievement of the question-asking and answering objectives in the daily ESL lessons indicated that they had acquired the language foundation necessary for using inquiry in the listening program.

The first step was to find out if such first grade children could switch from asking questions which were specifically cued, as in the ESL program, to generating original questions independently of such specific indirect question cues. For example, in the ESL program the children's questions were cued by the teacher's command, e.g. " Joe, tell Susie to ask Jim what he has.", and another child's subsequent question, e.g. "Susie, ask Jim. . .". In the Listening program the children's questions would be cued only by the teacher's minimal cue, "Who wants to ask a question?"

Data was gathered in three Navajo first grade classrooms participating in the second-year ESL program during the 1969-70 school year before the Listening program was implemented to find out if the children could and would generalize their question-asking skills to new content and respond to such a minimal cue. The teachers were asked to show two filmstrips the children had not seen before, and were instructed to use only the cue "Who wants to ask a question?" as they showed the filmstrips. The children were told at the beginning that they could

ask any questions they wished about any of the pictures, including asking them of the teacher. This was to insure that the children would feel free to ask questions that they might otherwise not ask out of consideration for their peers who might not know the answers. This safeguard was particularly important because the children knew that responses were always readily available in the ESL lessons in which a child could respond correctly to questions by making correct choices from a minimal situation in which other children and objects were "set up" to perform the action being asked about.

To summarize the data recorded by the teachers:

i) all the children in each classroom volunteered to ask questions in response to the cue "Who wants to ask a question?"

ii) all the questions were relevant to the visual information presented in the frames about which they were asked.

iii) all the questions were grammatically correct, that is, normal American English.

This data was taken as indication that such first graders could be expected to have the question-asking facility, and the willingness to use it, prerequisite to the Listening program. Two other important features appeared in the children's questions recorded by the teachers. One feature was the nearly total focus on recognizing and recalling information, and the other was the predominant yes/no question pattern. Of the classroom average of sixty-five questions, sixty-three were questions like: "Are those chickens? Is that a man riding the horse? Are the foxes in the cave?" While preference for such specific information-testing questions might be interpreted as typical of the age group (Mosher and Hornsby, 1966), the more significant feature for development of the Listening program was the recognition-recall focus of the questions. The tentative implication was that, having learned to ask questions with this focus throughout the ESL program, perhaps it would be just as feasible to teach the children to ask questions for other purposes.

Inquiry, as it is used in the Listening program, includes seeking information that is readily available in explicit facts, but also includes seeking other kinds of information, for example, that which may be inferred on the basis of explicit facts, that which may be compared with the facts, and that which may be predicted on the basis of facts. In addition, inquiry is used for hypothesis-formation, a skill familiar to the children as demonstrated by their preference for information-testing questions.

The ability of a listener to hypothesize while he is listening, that is, to provide himself with an anticipatory set about the material, appears to be a significant aid to listening comprehension.(Keller,1966) The significance of the anticipatory set, as a strategy worth developing in the children, is additionally supported by its compatibility with the objectives of inquiry and cognitive processing beyond the recall level. It is a strategy the mass media have applied for years to keep listeners tuned in and focused on the purpose of the message: "How will Tarzan rescue Jane from the man-eating tiger? Will the no-enzyme detergent get the wash as clean as the enzyme detergent?"

While the message senders of our mass media will continue providing the message-receivers with such ready-made anticipatory sets, it seems most useful in a learning-how-to-learn program to have the listeners learn to form their own hypotheses before and during a communication by asking questions about it. The listener's anticipatory questions provide him a focus, a frame of reference through which to consider the incoming data. These questions are also valuable in that they can trigger thinking processes relevant to the message, and thus profitably exploit the thinking time availed by the differential between speaking rate and thinking rate, whether that is the estimate of approximately 200 words per minute one study showed (Touissant, 1966), or the thousands of words per minute suggested by the accomplishments of some speed readers. Both the listener's attention to the material and his purpose in listening to it are fostered by his anticipatory questioning. This helps the listener get to his tasks of associating the ideas within the material and associating his related experiences to those ideas.

The complexity of these and other processes required in comprehending relatively longer units of expression in the new, or second language suggests that some general objectives might be derived for sequencing instruction, and that specific objectives might foster daily success toward the long-range goal. The long-range objective in the Listening program is learner skill in comprehending a message, retaining the salient features of the message (through answering his anticipatory questions and summarizing the data), then using other resources to answer (i) anticipatory questions which were not satisfactorily answered by the message, and (ii) other questions generated as a result of the message.

Acquisition of an anticipatory set, and familiarization with the thought processes comprising comprehension skills (cf. p.4) are the general learner objectives for Stage One of the program, made up of fifty-four daily lessons of about one half hour each. The specific objectives for each Stage One lesson are for the learner to ask questions before listening to a story, and to answer such questions after listening to the story.

Each thought process is the focus for the stories in a sequence of several lessons. For example, in lessons sixteen through eighteen the children paraphrase from one symbolic form to another through such activities as building simple models after listening to an oral description of them, and selecting and sequencing illustrations appropriate to a story after listening to the story.

The general objectives for Stage One are accomplished by (i) a cumulative sequence of cognitive objectives extrapolated from A Taxonomy of Educational Objectives for the Cognitive Domain (ii) the procedural content of basic lesson format, and (iii) the design of the oral messages in story form to focus on a particular cognitive objective for each lesson.

The cumulative and sequential nature of the hierarchy of cognitive objectives which comprise the outline might be simply illustrated by pointing out the need for a child to have knowledge of certain categories and classes before he can apply the comprehension process

of comparing relationships among them.

Procedural content of Stage One lessons provides a sequence of steps to insure learner success through observation and practice of the behavior specifically desired. A typical Stage One lesson is composed of three short stories, each story constructed as a paragraph of seven or eight sentences at most, drawing on the fund of language structure provided in the ESL program.

The function of the first story is to provide the learner a model analagous to his expected behavior. The teacher has a puppet ask anticipatory questions based on an introductory sentence she gives about the story she'll read. She reads the story, and then calls on volunteering chidren to respond to the questions the puppet asked in advance of the story. Children respond to the questions, and peers evaluate the responses for appropriateness, with the teacher assisting by confirming or correcting responses on the basis of the story.

The function of the second story is to provide the children practice in asking anticipatory questions based on an introductory sentence. Volunteers ask questions, and the teacher writes them on the chalkboard so they may be answered after she reads the story. As after the first story, the teacher again calls on volunteers to respond to one another's questions, and on other chldren to evaluate the responses.

The third story provides a final session in which the children ask questions before listening to the story, and answer them after listening to it. After this third, and last, story all the children respond to the advance questions by circling pictures on a worksheet. This tests the listening comprehension of all the children.

Each story in a lesson is designed to focus on a particular cognitive process, such as the extrapolation process of predicting the continuation of a sequence. Thus the introductory sentence for each story is designed to elicit specific questions about the story, i.e. questions about the sequence of events in the story, questions about the causes and effects in a story, questions about the generalizations which might be made on the basis of evidence presented in the story, etc.

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The children's questions which are related to the particular cognitive objective of a story are called "planned questions." To answer these questions, the children have to apply the thought process which is the focus of the story. For example, here are the introductory sentences, the children's questions, and the story for an early Stage One lesson in which the focus is distinguishing related from unrelated objects, a preliminary to the later task of distinguishing related from unrelated ideas.

Teacher: I'm going to read you a story about Sammy.
He saw his breakfast on the table, but he also saw something he didn't need for breakfast there, so he put it on the floor.

Joe : Did Sammy see a car?
Carl : Did Sammy have a truck?
Ervin : Did Sammy have a cat?
Ilene : What did Sammy eat for breakfast?
Leona : What did Sammy put on the floor?

Teacher : Sammy was getting ready for school. He was all dressed and ready to eat breakfast.
He looked on the table. He saw a plate of bacon and eggs. He saw a glass of orange juice.
He saw his baby kitten, and he saw a piece of bread. "Good," said Sammy. "Everything I want for breakfast is right here on the table.
But I don't need this for breakfast," Sammy laughed. "I'll put it on the floor."
He picked something up from the table and put it on the floor. Then he ate his breakfast.

Here are additional examples of children's questions from the same Navajo class about another story in the same lesson, which had different content, but the same focus on distinguishing related from unrelated objects:

Renee : What did Bobby find?
Leroy : What did Bobby take to play baseball?
Renee : What did he leave in the closet?
Carolyn : What did Bobby think?
Garry : What toy did Bobby want?

The children who ask, answer, and evaluate the planned questions and responses focus on distinguishing the related and unrelated objects in the stories. Children who ask, answer, and evaluate the other questions and responses also have a focused purpose while listening. While the minimal set of planned questions focuses attention on the cognitive purpose of the message, the additional questions provide a broader perspective about the message. After the third story, when the children respond to the planned questions by marking pictures on a worksheet, application of the necessary thought process by all the children is tested.

Briefly, the formative evaluation supplied by teachers' response on questionnaires indicated their own enthusiasm in discovering that their children could ask such good questions. They provided samples of questions and responses with every report, and these substantiated their enthusiasm. The variety of questions asked in Stage One lessons is exemplified in these random examples from both Navajo and Fresno classrooms:

Did the boy do what Emily wanted him to do?
What kind of sounds did Jimmy hear?
After Joe's balloon popped, did he want to go to the bathroom?
Why did Danny put his clothes in one place and his toys in another?
Will Larry get a big balloon or a small balloon?
What did Mary Jane choose to play with?
What did Penelope make disappear?
How did she make it disappear?

Though these examples are presented here without association with the cognitive objectives of the lessons in which they were asked, they indicate the children's development in inquiry which is appropriate to the task at hand, relevant to their own curiosity as it was tapped by an introductory sentence, and substantial in the kinds of information it seeks from the stories.

Problems indicated in the teacher's reports for the first Stage One unit of six lessons reflect primarily a period of pupil adjustment in becoming familiar with the procedures in this new kind of lesson.

By the third lesson most of the children (on a scale of "all","most", "about half", and "a fourth or less") in every classroom were volunteering to ask questions after listening to the teacher's introductory sentences about a story. Problems reported for the rest of Stage One were a random assortment reflecting occasional difficulties caused by the size and accuracy of visual aids, inappropriate construction of introductory sentences for the objective of a story, and similar items which were remedied in revising the program for the second year of use.

The general objectives for Stage Two occur further along the continuum toward the long-range goal, with specific objectives for fifty more lessons. The comprehension processes are recycled in new stories, with some additions. For example, in Stage One the children compare relationships only by distinguishing related and unrelated objects. During Stage Two the comparative relationship lesson sequence expands so the children distinguish objects, then actions, and finally ideas, for their degree of relationship to each other.

The general objectives of Stage Two are to familiarize the children with strategies for increased retention of material, and to foster question-asking during a message as well as before it, concomitant with the long-range goal of hypothesis-revision, while listening. In addition, the implication of a message for further thinking and reaction is promoted by designing new activities to replace the picture worksheets at the end of each lesson. To provide for achievement of these goals through daily specific objectives, lesson procedures were adapted so that each lesson contains one longer story rather than the three short stories. This story is presented in two parts, a short introductory paragraph, and a longer conclusion. The children's objectives are to ask questions after listening to the first paragraph, then answer them after listening to the entire story. The children then contribute to an oral summarization of the story, which the teacher prints on large chart paper. The final lesson activity

is playing a game, making models, dramatizing, or whatever activity results most naturally from the content of the story the children have listened to. For example, in a Stage Two lesson on paraphrasing, the children listen to a story about a child making his own picture book. The materials and the steps in the process are detailed in the story. After listening to the story, the children end the listening lesson by makingtheir own picture books following the same basic steps. These activities perform the testing function of the picture-worksheets of Stage One.

The objective of Stage Three is transfer of Stage One and Stage Two skills to other areas of school study. This might be envisioned as using for listening lesson content subject matter from science, social studies, health and safety, math, and so forth. Respect for the structure of the subject matter of these and other areas, however, suggests that certain Listening lesson characteristics might instead be applied to other subject area lessons.Within the design of the second grade curriculum developed by CITE, for example, the children are encouraged to ask questions before and during lessons in all subject areas. They answer these questions at the end of the lesson, classifying unanswerable questions as potentially applicable for the next lesson. The CITE reading program, too, is characterized by the children's selection of questions in advance of reading and then response to these questions after they have read.

But further development in listening is suggested by the research in this field if the learner is to benefit from the skills taught in Stages Onethrough Three. Two pieces of evidence indicate the further direction for the Listening program in Stages Four, Five, and Six. One notes the significant difference in the comprehension and retention of material by the listener who has a favorable anticipatory set in contrast with the listener who has an unfavorable bias at the outset. (Keller, 1966) The other notes the temporary paralysis that occurs when a listener hears a "loaded word," that is, a term that is emotion-

laden for him. (Toussaint, 1966) This might, indeed, cause a listener to "see red." While any practiced rhetoritician is aware of this, and uses it, school children are rarely taught how to handle the situation as listeners. If the learner can retain the relatively objective kind of anticipatory set practiced in the first three stages of the program, and then become skilled in recognizing propaganda techniques, perhaps his chances of becoming a skilled, mature listener will be increased. Toward this end, among others, general objectives for Stages Four through Six are designed. They refer generally to curriculum development for late second grade through fifth grade for second language learners.Maintenance of basic listening comprehension strategies from previous stages characterizes each new stage.

General objectives for Stage Four are further development of hypothesis-formation on the basis of a message, for example, asking questions initiated by information presented in the area of natural science; and familiarization with other resources for seeking answers to such questions, for example dictionaries and other reference works, resource speakers, and experimentation. The cognitive processes for this stage are characterized by the application skills described by Bloom, in which the student learns to select the appropriate knowledge and comprehension skills for solving particular problems.

Stage Five is characterized by transfer of the major strategies learned so far to understanding persuasive messages, including familiarization with various propaganda techniques. Analysis, synthesis, and evaluation skills described by Bloom are introduced in this stage An explicit objective is maintenance of objectivity in message-receiving through awareness of the purpose of such messages and skill in individual hypothesis-formation, revision, and testing.

Stage Six recycles analysis, synthesis, and evaluation processes in more explicit terms, for a variety of purposes, including classifying messages by distinguishing between those whose value is self-

contained (some humorous stories, fantasy, etc.), and those worthy of further investigation (some political rhetoric, traditional subject area studies, etc.). A main objective is for the students to evaluate messages for their major value, their critical contributions and errors in information and logic, and to demonstrate thoughtful reaction when it is both appropriate and of personal interest.

On the basis of Lambert's studies on young children being schooled in French as a second language (Lambert, 1970), the potential seems high for transfer of Listening program strategies taught in the second language to the children's native languages, that is, to voluntary application to message-receiving in Navajo or Spanish. Covington's reference to the need for coordinating such thought processes with more traditional objectives, such as acquisition of subject matter and assimilation of cultural values suggests another possibility for multilingualism and multiculturalism. The organization of cognition suggested by Bloom reflects the academic nature of English-speaking American educational institutions. Perhaps some basic Listening program strategies may be applied to other content substituted from the organization of thinking reflected in the culture of the native language.

The working hypotheses of the Listening program suggest a multitude of questions for study. Does this program effect better second language comprehension on the part of the children participating in it, than on the part of similar children who do not participate in it? What is the effect of the anticipatory set on children who generate it for themselves as contrasted with its effects on children who only listen to questions generated by their peers? What is the relationship of oral question-asking by Navajo children to their development of inner speech? Considering the potential for early intervention in the education of children, what would be the effect of introducing this program in the children's native language before first grade, and continuing it in the second language once sufficient fluency is gained in the second language? Its significance as a teacher-training program for beginning inquiry education is suggested by the unsolicited favorable appraisal of teachers who have implemented it in their

classrooms. What would be the effect of a condensed version of the Listening program for the purpose of teacher training in recognizing and encouraging good questions on the part of children?

These questions suggest the scope of investigation possible on the basis of the Listening program, just as this model suggests possibilities for the better language education of young children.

Bibliography

Bloom, Benjamin S. et al. Taxonomy of Educational Objectives, Handbook 1 : Cognitive Domain . New York: David Mckay Company, 1966.

Covington, Martin V. "The Cognitive Curriculum: A Process-Oriented Approach to Education." Cognitive Studies. Ed. Jerome Helmuth. New York: Brunner/Mazel, 1970, p.491.

Duker, Sam. Listening: Readings. New York. The Scarecrow Press, 1966.

Guszak, Frank J. "Teacher Questioning and Reading." The Reading Teacher, Vol. 21 No.3 (1967), 227-34.

Keller, Paul W. "Major Findings in Listening in the Past Ten Years." Listening: Readings. Ed. Sam Duker. New York: Scarecrow Press, 1966.

Lambert, Wallace E., M. Just, and N. Segalowitz. "Some Cognitive Consequences of Following the Curriculum of Grades One and Two in a Foreign Language." Monograph Series on Languages and Linguistics, Number 23. Washington, D.C.: Georgetown University Press,1970.

Lister, E. Darlene. "The Public Speaks Out." Los Angeles Times. September 4, 1971, p. 4.

Mosher, Frederic A., and Joan Rigney Hornesby. "On Asking Questions." Studies in Cognitive Growth. Ed. Jerome S. Bruner, et al. New York: John Wiley and Sons, 1966, pp. 86-102.

Postman, Neil, and Charles Weingartner. Teaching as a Subversive Activity. New York: Delacorte Press, 1969, pp. 19-23.

Sanders, Norris M. Classroom Questions, What Kinds? New York: Harper and Row, 1966.

Toussaint, Isabella H. "A Classified Summary of Listening, 1950-1959." Listening: Readings. Ed. Sam Duker. New York: The Scarecrow Press, 1966, p. 157.

Vygotsky, L.S. Thought and Language. New York: John Wiley and Sons, 1962.

Wilson, Robert D. Curricular Implications of the Relationship Between Language and Thought. Paper delivered at the TESOL Conference, San Francisco, March, 1970. Unpublished.

Wilt, Miriam. " Demands on the Listening Skills of Elementary School Children." Listening: Readings. Ed. Sam Duker. New York: Scarecrow Press, 1966.